IN THE CLAIMS:

Kindly cancel claims 9, 13 and 14 without prejudice.

Please amend claims 1-8 and 10-12, without prejudice, as follows:

1. (Amended) A process for immobilizing nucleic acid molecules on a substrate, comprising the steps of:

a) treating said substrate for about 0.1 to 10 minutes with atomic oxygen plasma prior to immobilizing said nucleic acids; and

b) immobilizing said nucleic acid molecules on said treated substrate.

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2. (Amended) The process according to claim 1, wherein the nucleic acid is selected from the group consisting of DNA, RNA, PNA, CNA, RNA, HNA, p-RNA, oligonucleotides, oligonucleotides of DNA, oligonucleotides of RNA, primers, A-DNA, B-DNA, Z-DNA, polynucleotides of DNA, polynucleotides of RNA, T-junctions of nucleic acids, domains of non-nucleic acid polymer-nucleic acid blockpolymers and combinations thereof.

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3. (Amended Twice) The process according to claim 1, wherein the nucleic acid is double-stranded or single-stranded.

4. (Amended Twice) The process according to claim 1, wherein the nucleic acid is of natural character, modified, such as substituted with functional groups, non-modified or artificially generated.

5. (Amended Twice) The process according to claim 1, wherein the substrate is a single crystal surface or an amorphous surface.

6. (Amended) The process according to claim 5, wherein said single crystal surface and said amorphous surface are selected from the group consisting of silicon oxides, glass, aluminum oxides, sapphire, perovskites, and derivatives and stabilized and/or doped derivatives thereof.

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7. (Amended Twice) The process according to claim 1, wherein microwave generated oxygen plasma producing atomic oxygen from an oxygen gas or from a mixture of gases containing oxygen is used.

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8. (Amended Twice) The process according to claim 1, wherein high-voltage generated and/or UV-light emitting source generated oxygen plasma producing atomic oxygen from an oxygen gas or from a mixture of gases containing oxygen is used.

10. (Amended Twice) The process according to claim 1, wherein the atomic oxygen plasma treatment is carried out using an oxygen pressure in the range of about 0.1 to 1.0 mbar.

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11. (Amended Twice) The process according to claim 1, wherein the nucleic acid to be immobilized on the substrate is present in an aqueous solution.

12. (Amended) The process according to claim 11, wherein the substrate is treated with said aqueous solution for about a few seconds to about 5 minutes.

Please add new claims 15 to 17 to read as follows:

-- 15. The process according to claim 6, wherein the perovskites are selected from the group consisting of $SrTiO_3$, $LaAlO_3$ and ZrO_2.

16. The process according to claim 10, wherein the pressure range is from about 0.2 to 0.8 mbar.

17. The process according to claim 12, wherein the substrate is treated with said aqueous solution for about 1 to 2 minutes. --